



# The Effect of the Coronavirus on Cyberbullying Research Methods

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## Abstract

Cyberbullying has recently grown larger as technological advances have occurred. Becoming more relevant during the Covid-19 pandemic when the majority of the world was stuck at home during quarantine and relied on technology such as social media to stay in touch with one another. In this story, 100 articles about cyberbullying from 2019 before the pandemic began and 100 articles from 2021 after the pandemic has begun to take place were examined in order to determine if there were any differences in how cyberbullying has been researched. These articles were examined by stating the number of authors, the gender of the authors, the country it was taken place in, if the article included an international author, the discipline of the first author, the focus of the article, the research method used, the sample size if given, and the first authors highest degree of education. This information was all coded and used to determine if the pandemic has placed any influence on the methods researchers use to research cyberbullying

## Introduction

### BACKGROUND

After completing some research on cyberbullying, itself without Covid-19 in mind, we thought that the Coronavirus would have an effect on the methods used to research cyberbullying due to the lack of human interaction that was able to take place during the months of quarantine. Being that the majority of the world was stuck at home during the months of the worldwide mass quarantine, certain types of research methods such as, but not limited to interviews, in person surveys, random sampling, clinical case studies, and regular in person case studies were not able to take place since everyone was required to stay home and avoid contact with each other. Due to the lack of ability to physically go out and obtain research in the field, it became apparent to us that the methods used to study cyberbullying after the pandemic would differ from the methods used before when the restraint of being stuck at home was not there in the past. Another factor that made us question if cyberbullying research methods would be altered is the fact that many people worldwide increased their social media and technology usage greatly being that there was not very much else to do. With this being said, it raised the question of whether or not researchers would have to change their research methods due to an increase in cyberbullying.

## Methods

### METHOD OF RESEARCH AND TOOLS:

For this study, 100 articles dating from 2019 before the covid-19 pandemic were examined by taking account for the the number of authors, the gender of the authors, the country it was taken place in, if the article included an international author, the discipline of the first author, the focus of the article, the research method used, the sample size if given, and the first authors highest degree of education. Next, 100 articles dating from 2021 after the major lockdown of the Covid-19 pandemic quarantine were examined by also stating the number of authors, the gender of the authors, the country it was taken place in, if the article included an international author, the discipline of the first author, the focus of the article, the research method used, the sample size if given, and the first authors highest degree of education. Once this was completed and all 200 articles were appropriately coded into the Microsoft Excel sheet, they were ran through a program called SPSS which gave the output for end findings. This program covered the coded sheets into the Statistical Package for Social Sciences by taking the Excel sheets and running it through the specific area that we wanted to conclude finding on. Once this was done, the SPSS results were examined to determine if the differences in cyberbullying research methods from before the pandemic to now.

## Results

The general results from this study show that most authors of the articles, from the pre-covid and post-covid research obtained a doctorate degree from their education, with 111 out of the 200 having this type of degree. It was also found that out of the 25 authors with a bachelor's degree, 18 of them were from the post-covid sample while only 7 were from the pre-covid sample. It can be generalized that it was harder to find a job during covid so many college graduates went into the field of research while trying to obtain one. In terms of gender the majority of the articles were multigendered, having 97 out of the 200 articles being mixed in gender. A slightly close second came for females ranging in 67 out of the 200 articles being female guided and 34 having only male authors. On average, the majority of the articles had at least three authors who worked on the project at hand. Moving forward, in terms of the country that the article was taken place in, the articles tended to have the majority of the articles written in the United States, which resulted in 47 articles being written here. The next majority was Spain which had 20 out of the 200 articles being from here. The articles also seemed to be mainly coming from India and China as there were approximately 20 articles from each of these countries. This tells us that cyberbullying is an international problem. The most common research methods used were literature reviews, interviews, cross-sectional studies, and automatic detection systems. One difference between the two article samples was that post-covid showed 3 articles that used a bibliometric analysis for the method of study, while pre-covid did not have any methods like this applied. Post-covid also applied online surveys about cyberbullying as a method of research and pre-covid only indicated that face-to-face surveys were given. Both article samples tended to favor using machine learning and automatic detection services in order to examine cyberbullying. There were a sizable number of authors from the discipline of engineering, psychology, the medical field in general, computer science, and also criminal justice. This tells us that cyberbullying research is an interdisciplinary subject and should be studied and addressed in this fashion by looking at it in an interdisciplinary lens. One interesting finding was that the articles were split half and half with the discipline of psychology having 19 from before Covid and 19 after. Another finding was that 7 out of the 200 articles were written by medical doctors. Out of these 7, 5 of them were from pre-covid while just 2 were from post-covid, which can infer that many medical providers were busier handling the pandemic and turned their focus away from doing research. The focus of both article samples tended to revolve around the correlates of cyberbullying, health and wellbeing, and also technology. An interesting finding here was that the focus of the articles that came from the field of technology were split fifty-fifty between the 46 articles with 23 being from pre-covid and 23 being from the post-covid sample, which led one fourth of the articles came from auto-detection and algorithms. In terms of the articles having one or more international authors, the majority of the article samples both had at least one international author affiliated with the work, which resulted out to the study having 149 articles with an international author and 50 without. In comparison of pre-covid and post-covid there is not much of a difference between the samples having international authors as 72 international authors were affiliated with the pre-covid sample and 72 out of the 149 were from the post-covid sample. Among the 50 articles that did not have an international author 27 were from pre-covid and 23 were from post-covid so we do not see very drastic differences in this aspect of our research. This drives home the point that cyberbullying is not only a problem for the United States, but it is also an international problem.

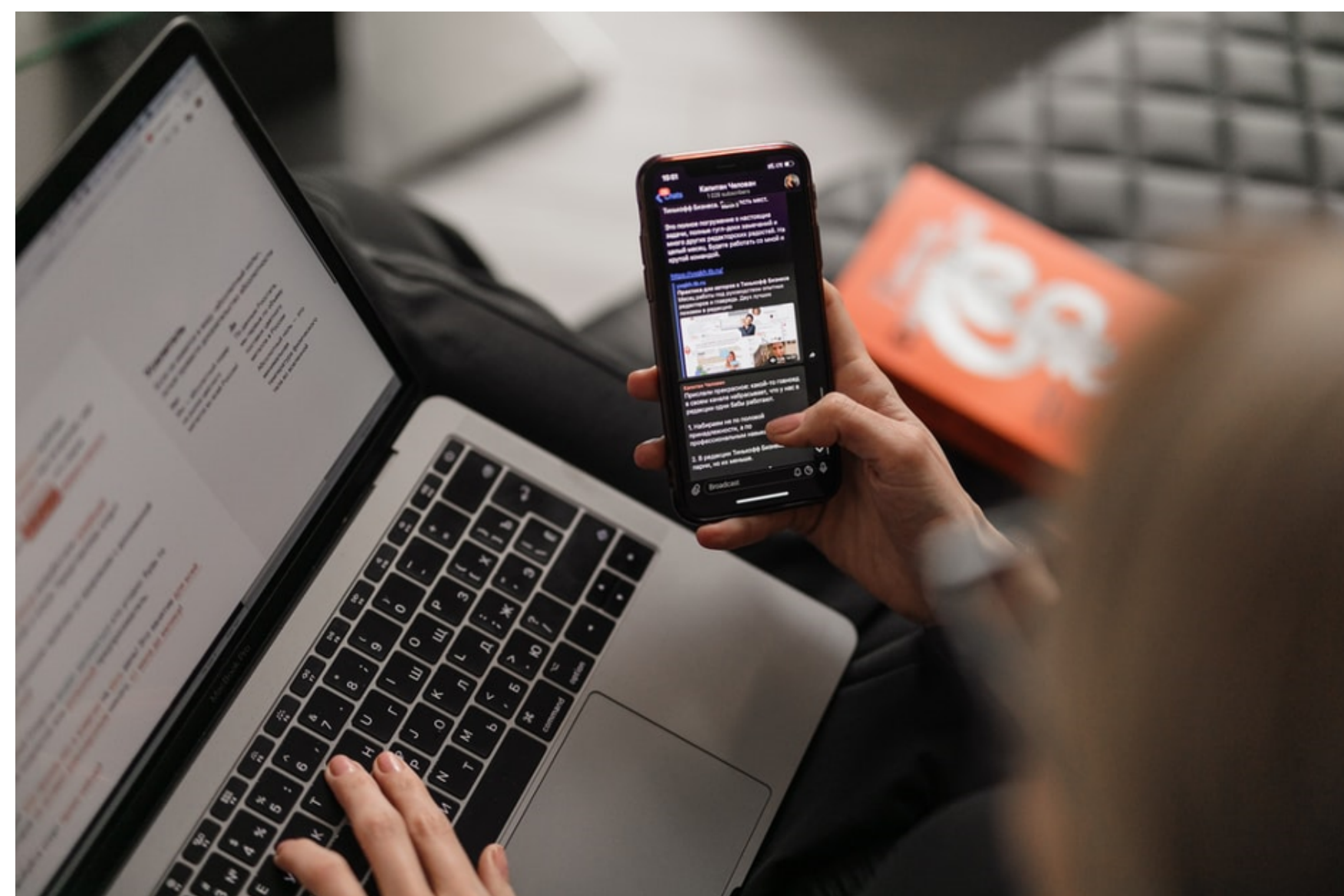


Table 1. Demographics and Characteristics of the Articles

	n	%
Gender of Author(s)		
Male	34	17.0
Female	67	33.5
Both	97	48.5
International Author		
Yes	149	74.5
No	50	25.0
1st Author Degree Levels		
BS	25	15.1
MS	23	13.9
PhD	111	66.9
MD	7	4.2
Study Focus		
Consequences	22	11.0
Correlates	60	30.0
Health/Well-being	24	12.0
Other	10	5.0
Perceptions	1	.5
Prevention/Intervention	23	11.5
Technology	46	23.0
Types	14	7.0

Table 2. Demographics and Characteristics of the Articles before and after Covid

	Pre		Post	
	n	%	n	%
Gender of Author(s)				
Male	16	47.1	18	52.9
Female	33	49.3	34	50.7
Both	49	50.5	48	49.5
International Author				
Yes	72	72.0	77	77.0
No	27	27.0	23	23.0
1st Author Degree Levels				
BS	7	9.1	18	20.2
MS	12	15.6	11	12.4
PhD	53	68.8	58	65.2
MD	5	6.5	2	2.2
Study Focus				
Consequences	13	13.0	9	9.0
Correlates	29	29.0	31	31.0
Health/Well-being	13	13.0	11	11.0
Other	3	3.0	7	7.0
Perceptions	0	0.0	1	1.0
Prevention/Intervention	14	14.0	9	9.0
Technology	23	23.0	23	23.0
Types	5	5.0	9	9.0

Table 3. Mean Number of Authors and Sample Size before and after Covid

	Pre-Covid		Post-Covid	
	Mean	SD	Mean	SD
Number of Authors	3.27	2.27	3.47	2.33
Sample Size	1514.2	2838.63	1090.78	1596.38

## Discussion

After gathering the data on the articles from before and after the pandemic and running them thorough the SPSS system to convert them to the Statistical Package for Social Sciences, it was found that there are not many differences in terms of how researchers are obtaining their research from before the pandemic to after it. Statistically all of the findings are very similar in terms of each variable studied. This could be due to the fact that the research was previously obtained before the Coronavirus was even thought of and is just now being published so it may take a year or two more to decide if there are any differences in the research methods of cyberbullying. Another explanation for this could be that cyberbullying is such a broad topic and cuts across so many areas that the research methods will never see an effect placed upon them due to the pandemic. The final explanation to this could be that the behaviors of research methods simply did not change in the way that we predicted them to. This study found that covid has not slowed down or changed cyberbullying research methods as it was still being studied through the duration of the worldwide quarantine and is still being addressed as new waves of the pandemic are being presented. Overall, no major statistical differences were found in this study.



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